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SOURCE Newspapers as indicated

INDIAN ATOMIC ENERGY PRODUCTION

Comment: The following presents information on the Indian Rare Earths Factory, the first atomic energy processing or separation plant to be established in India. The plant was dedicated by Prime Minister Nehru on 24 December 1952. The information is taken from Hindi and Bengali daily newspapers for the period 24 - 27 December 1952.

Numbers in parentheses refer to appended sources. 7

Name, Location, Area, Capital

The Indian Rare Earths Factory (1) is located on the banks of the Periyar River (2), in Ellur, near Alwaye (10 07 N 76 21 E) in Travancore-Cochin State, India. (3) The factory and ground cover approximately 22.5 acres of land. (4)

The plant was organized in September 1950 as the Indian Rare Earths Limited on the recommendation of the Indian National Planning Commission. Its initial investment was 5 million rupees. It was later increased to 8 million rupees with 55 percent of the shares held by the central government and 45 percent by the Travancore-Cochin state government. (1)

The plant has been operating since July 1952, and was formally dedicated to the Indian public by Prime Minister Nehru on 24 December 1952. (4)

Monazite Deposits of Travancore-Cochin

Monazite sand is a type of rare earth deposit found in large quantities along the coast of Travancore-Cochin. It is formed by the action of rain water and ocean waves on tiny particles of rocky matter which are carried down to the sea and later redeposited as sand on the beaches. Several varieties of sand are tossed up on the beaches in this way.

The monazite sand in this area is yellow in color and is five times as heavy as water.

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Monazite was first discovered in Travancore-Cochin in 1909 by C. W. Schoenberg, a German chemist. In 1910, a British firm signed an agreement with the Travancore government and continued imports of the sand until the expiration of the contract.(1)

It is said that 1,500,000 tons of monazite will be available in India.(5)

Plant Capacity

The rare earths plant is currently processing monazite sand for the production of rare earth chlorides, carbonates, trisodium phosphate, caustic soda, and thorium nitrate for industry in the manufacture of abrasives, alloys, soap, gas mantles, etc. The output of such products as thorium nitrate will be so large that India will be able to stop all imports and begin exporting these materials.(6)

For the time being, the plant will process 1,500 tons of monazite annually. The amount is expected to be doubled with some minor changes.(2)

The maximum capacity [presumably annual] is 1,650 tons of chloride or 1,150 tons of carbonate. However, the average output of these two products is 1,000 tons and 450 tons respectively. The plant will also be able to produce between 1,500 and 1,800 tons of trisodium phosphate, 900,000 gallons of caustic soda, and approximately 205 to 228 tons of thorium nitrate. Some remaining portions will be used in the extraction of thorium and uranium in the various national laboratories to be established by the Indian Atomic Energy Commission. This plant will also be used in the extraction of uranium (1), the ore of which will come from several localities in Bihar State.(5)

The plant will be capable of supplying one third of the world's demand for rare earths.(3)

Personnel

The board of directors of the factory is composed of a chairman and six members, including four representatives of the central government and two representatives of the Travancore-Cochin state government. They are as follows:

J. D. Chaukasi, Chairman of the Board, representing industry.

Dr H. J. Bhabha, F.R.S., Chairman of the Indian Atomic Energy Commission; member, representing the government of India.

Dr S. S. Bhatnagar, Director, Scientific and Industrial Research Council, and Secretary, Natural Resources and Scientific Research Ministry; member, representing the government of India.

K. R. K. Menon, Secretary of the Finance Ministry; member, representing the government of India.

Dr K. S. Krishnan, Director, National Physical Laboratory; member, representing the government of India.

The Chief Secretary of Travancore-Cochin State; member, representing the state government.

The Finance Secretary of Travancore-Cochin State; member, representing the state government.(1)

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Future Plans

The Indian government has approved the plan prepared by the Indian Atomic Energy Commission for the development of atomic energy in the next 4 years. This plan includes a recommendation for the construction of a medium-size reactor /no further data given on location or description/ for purposes of atomic experimentation.(4)

SOURCES

1. Delhi, Navbharat Times, 24 Dec 52
2. Allahabad, Bharat, 26 Dec 52
3. Lucknow, Navjivan, 25 Dec 52
4. Calcutta, Jugantar, 25 Dec 52
5. Banaras, Aj, 26 Dec 52
6. Ibid, 27 Dec 52

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